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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/994,950 | 11/27/2001 | Nobuyuki Yamashita | HITACHI-0016 | 1777 |

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| EXAMINER | |
|---|---|
| HWANG, JOON H | |
| **ART UNIT** | **PAPER NUMBER** |
| 2162 | |

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/994,950 | YAMASHITA, NOBUYUKI | |
| | Examiner | Art Unit | |
| | Joon H. Hwang | 2162 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *07 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *31 and 33* is/are allowed.

6)☒ Claim(s) *1,3-11,13-21,23-30 and 32* is/are rejected.

7)☒ Claim(s) *2,12 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. The applicant added claims 31-33 in the amendment received on 9/7/04.

2. The claims 1-33 are pending.

### *Response to Arguments*

3. Applicant's arguments filed in the amendment received on 9/7/04 have been fully considered but they are not persuasive.

The applicant argues that the cited references alone or in combination fails to teach, disclose or suggest "the corresponding layer information" to be generated and registered in "the layer structure information" for a newly inputted member if "the corresponding layer information" is absent. The examiner respectfully traverses.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a newly inputted member) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ohata discloses constructing a multi-dimensional data model in a multidimensional database (fig. 3) by definition sentences (fig. 4) that define dimensions, dimension members, hierarchical relations of dimension members, dimension member formulas, etc., (fig. 5 and fig. 6). This teaches inputting a member and generating corresponding layer information according to a predetermined rule (i.e., definition sentence) and registering the corresponding layer information (i.e., dimensions, dimension members, and hierarchical relations of dimension members are defined to form a multidimensional data model). Ohata discloses ascertaining whether a page is registered or not for storing data of dimension and dimension members, wherein registering a page involves searching a database (i.e., dimension table and dimension member table) for basic dimension members information (i.e., hierarchical relations of dimension members, abstract, lines 41-47 in col. 15, lines 55-60 in col. 16, lines 49-61 in col. 17, and fig. 14). Ohata does not explicitly disclose the determination step in relation to a dimension member after a multidimensional data model is constructed. However, DeKimpe teaches restructuring an outline (i.e., a multidimensional data model). DeKimpe discloses a cube (i.e., a multidimensional data model) has hierarchies or formula-based relationships (among dimension members) (lines 25-48 in col. 7). DeKimpe teaches adding or deleting dimensions or dimension members in order to modify the outline via SQL statement (line 57 in col. 11 thru line 6 in col. 12, lines 11-23 in col. 15, and lines 3-7 in col. 16), which can be resulted in better data analysis. Modifying or restructuring the outline (a

multidimensional data model) by adding (new or existing) dimension members teaches registering the dimension members in the outline. Added channel dimension having mail order and partner dimension members is shown in fig. 6. In other words, channel dimension and mail order and partner dimension members are registered in the outline according to generated SQL statement. Also its hierarchical relations of the dimension members are defined and registered (fig. 6). Therefore, based on Ohata in view of DeKimpe, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of DeKimpe to they system of Ohata for adding a dimension member to a structure of created data model for better data analysis.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

"Prima facie case of obviousness is established when **teachings of prior art appear to suggest claimed subject matter to person of ordinary skill in art**; it is incumbent upon applicant to go forward with objective evidence of unobviousness once prima facie case is established." In re Rinehart (CCPA) 189 USPQ 143 Decided Mar. 11, 1976 No. 75-608 U.S. Court of Customs and Patent Appeals.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 32 recites the limitation "the predetermined layer rule" in 2nd to last line of the claim 32. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 3-11, 13-21, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohata et al. (U. S. Patent No. 5,864,857) in view of Dekimpe et al. (U.S. Patent No. 6,542,895).

With respect to claim 1, Ohata discloses storing and retrieving multidimensional data (abstract). Ohata discloses inputting a definition of a data model of multidimensional data, which includes a definition of a data structure of the data model including dimensions and dimension members and a definition of data of the data model (lines 1-31 in col. 6 and figs. 4-6), which teaches registrations of dimension members in hierarchy(layer) information. Ohata discloses definition sentences for generating the hierarchy information (figs 4-5), which teaches a predetermined rule for generating the hierarchy. Ohata discloses determining whether a page is registered for dimension members and registering the page in the absence of such page for dimension members

(fig. 1, fig. 16, abstract, and line 47 in col. 9 thru line 5 in col. 13). Ohata discloses constructing a multi-dimensional data model in a multidimensional database (fig. 3) by definition sentences (fig. 4) that define dimensions, dimension members, hierarchical relations of dimension members, dimension member formulas, etc., (fig. 5 and fig. 6). This teaches inputting a member and generating corresponding layer information according to a predetermined rule (i.e., definition sentence) and registering the corresponding layer information (i.e., dimensions, dimension members, and hierarchical relations of dimension members are defined to form a multidimensional data model). Ohata discloses ascertaining whether a page is registered or not for storing data of dimension and dimension members, wherein registering a page involves searching a database (i.e., dimension table and dimension member table) for basic dimension members information (i.e., hierarchical relations of dimension members, abstract, lines 41-47 in col. 15, lines 55-60 in col. 16, lines 49-61 in col. 17, and fig. 14). Ohata does not explicitly disclose the determination step in relation to a dimension member after a multidimensional data model is constructed. However, DeKimpe teaches restructuring an outline (i.e., a multidimensional data model). DeKimpe discloses a cube (i.e., a multidimensional data model) has hierarchies or formula-based relationships (among dimension members) (lines 25-48 in col. 7). DeKimpe teaches adding or deleting dimensions or dimension members in order to modify the outline via SQL statement (line 57 in col. 11 thru line 6 in col. 12, lines 11-23 in col. 15, and lines 3-7 in col. 16), which can be resulted in better data analysis. Modifying or restructuring the outline (a multidimensional data model) by adding (new or existing) dimension members teaches

registering the dimension members in the outline. Added channel dimension having mail order and partner dimension members is shown in fig. 6. In other words, channel dimension and mail order and partner dimension members are registered in the outline according to generated SQL statement. Also its hierarchical relations of the dimension members are defined and registered (fig. 6). Similar to the determination step for page in Ohata, such step can be utilized for dimension member in order to avoid unnecessary duplicated process for the dimension member by ascertaining its existence. Therefore, based on Ohata in view of DeKimpe, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of DeKimpe to they system of Ohata for adding a dimension member to a structure of created data model for better data analysis.

With respect to claim 3, Ohata teaches rules expressed in regular expression (figs. 4-5).

With respect to claim 6, Ohata teaches the predetermined rule including an identifier of a database and description of a predetermined format, the database containing a source for generating the corresponding hierarchy information (figs. 4-6 and lines 1-31 in col. 6).

With respect to claim 7, Ohata teaches accessing the database to obtain the source (figs. 2 and 4-6 and lines 1-31 in col. 6).

The limitations of claims 4-5 are rejected in the analysis of claims 6-7 above, and these claims are rejected on that basis.

With respect to claim 8, Ohata discloses processing preparation, storing and retrieval of definition information of multidimensional data in response to a request from a user (lines 21-40 in col. 5). Ohata discloses preparing the data model in order to process the request, wherein there is a plurality of data models and the request comprises searching, storing, and retrieving (lines 55-60 in col. 16, and figs. 14, 17 and 18). This teaches in the absence of the data model, the data model is generated in order to process the request from the user. Furthermore, such determining step can be utilized for the data model in order to avoid unnecessary duplicated generation process for the data model by ascertaining its existence. Therefore, the limitations of claim 8 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 9, Ohata discloses generating the corresponding hierarchy information according to a sequential application of the main hierarchy rule and the plurality of the sub-hierarchy rules (figs. 4-5). Ohata does not explicitly disclose determining whether or not the hierarchy information is successfully generated, the status of process. However, DeKimpe discloses an indication of whether a request process is failed or not (fig. 8). Therefore, based on Ohata in view of DeKimpe, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ohata with the teachings of DeKimpe for the indication of the process status in order to provide a status of a result or outcome of the process.

With respect to claim 10, the limitations of claim 10 are rejected in the analysis of claim 8, and the claim is rejected on that basis.

8. Claims 11 and 13-20 are essentially the same as claims 1 and 3-10 except that it sets forth the claimed invention as a system rather than a method and rejected for the same reasons as applied hereinabove.

9. Claims 21 and 23-30 are essentially the same as claims 1 and 3-10 except that it sets forth the claimed invention as a recording medium rather than a method and rejected for the same reasons as applied hereinabove.

***Allowable Subject Matter***

10. Claims 2, 12, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 12, and 22 identify the distinct feature, the predetermined layer rule includes rules for character-row converting a name of the member and for generating the layer information. The closest prior art, Ohata et al. (U. S. Patent No. 5,864,857) disclosing storing and retrieving multidimensional data, fails to suggest the claimed limitation as mentioned above in combination with other claimed elements.

11. Claim 32 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claim 32 identifies the distinct feature, the predetermined layer rule includes rules for character-row converting a name of the member and for generating the layer information. The closest prior art, Ohata et al. (U. S. Patent No. 5,864,857) disclosing

storing and retrieving multidimensional data, fails to suggest the claimed limitation as mentioned above in combination with other claimed elements.

12. Claims 31 and 33 are allowed.

***Reason For Indicating Allowable Subject Matter***

13. Claims 31 and 33 identify the distinct feature, "the predetermined layer rule includes rules for character-row converting a name of the member and for generating the layer information" are not taught or suggested by the prior art made of record. The closest prior art, Ohata et al. (U. S. Patent No. 5,864,857) disclosing storing and retrieving multidimensional data, fails to suggest the claimed limitation as mentioned above in combination with other claimed elements. The above feature in conjunction with all other limitations of the dependent and independent claims 31 and 33 are hereby allowed.

***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joon Hwang
5/27/04

JEAN M. CORRIELUS
PRIMARY EXAMINER